

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
19 May 2005 (19.05.2005)

PCT

(10) International Publication Number
WO 2005/046259 A2

(51) International Patent Classification⁷: **H04Q 7/00**

(21) International Application Number:
PCT/IB2004/052317.

(22) International Filing Date:
5 November 2004 (05.11.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
200310115658.9
10 November 2003 (10.11.2003) CN

(71) Applicant (for all designated States except US): KONINKLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): SUN, Li [CN/CN];

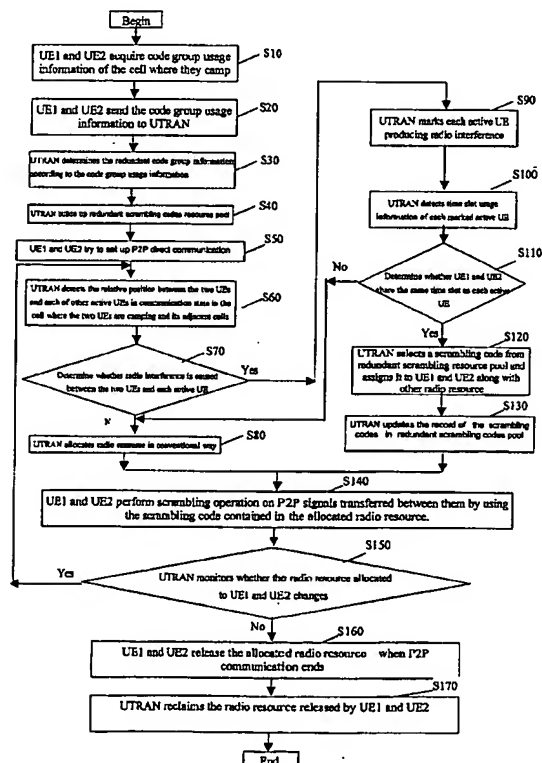
Philips Electronics China, 21/F Kerry Office Building
218 Tian Mu, Xi Road, Shanghai 200070 (CN). JIA,
Qunli [CN/CN]; Philips Electronics China, 21/F Kerry
Office Building 218 Tian Mu, Xi Road, Shanghai 200070
(CN). ZHANG, Xuejun [CN/CN]; Philips Electronics
China, 21/F Kerry Office Building 218 Tian Mu, Xi Road,
Shanghai 200070 (CN).

(74) Common Representative: KONINKLIJKE PHILIPS
ELECTRONICS N.V.; c/o HAQUE, Azir, Philips Elec-
tronics China, 21/F Kerry, Office Building, 218 Tian Mu
Xi Lu Road, Shanghai 200070 (CN).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,

[Continued on next page]

(54) Title: A METHOD AND APPARATUS FOR MITIGATING P2P INTERFERENCE IN P2P-ENABLED COMMUNICATION SYSTEMS



(57) Abstract: A method to be performed by a network system is proposed, for P2P communication to cancel interference, comprising steps of: determining the redundant code group information, according to the code group usage information of the cell in which two UEs to establish P2P connection camp and its adjacent cells; detecting the relative position between said two UEs and each of other active UEs in communication state in the cell where said two UEs are camping and its adjacent cells; if at least one UE of said two UEs causes radio interference to at least one of said active UEs according to the relative position, further determining whether said UE and said active UE are assigned in the same time slot; selecting a scrambling code from the redundant code group information and assigning it to said two UEs if said UE and said active are assigned in the same time slot, so that said two UEs can perform scrambling operation by using said scrambling code on P2P signals transferred between said two UEs.



PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

- (84) **Designated States** (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

Declaration under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS,

Published:

- without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.